NAUI Scuba Diver
(A) Written
Examination

Directions: This test includes 60 standard questions. There is only one correct answer per question. **Please use the answer sheet provided to record your answers. Use dark, solid circles to mark answers. Do not mark on this exam. The exam is closed book/notes.**

Equipment

1. When selecting a face mask, the most important thing to consider is:
   a) Color.
   b) That it has a purge valve.
   c) Tempered glass.
   d) Proper seal and fit.

2. When rinsing a regulator it is essential to first:
   a) Be sure the dust cap is in place to prevent water from entering the first stage.
   b) Depress the purge button several times.
   c) Fill the rinse tub with ionized water.
   d) Have the first stage lower than the second stage.

3. Diving equipment should be:
   a) Rinsed thoroughly in fresh water and allowed to dry in the sun.
   b) Rinsed thoroughly and sprayed with silicone preservative.
   c) Rinsed thoroughly, dried and stored in a cool place.
   d) Rinsed thoroughly in vinegar water and stored.

4. Scuba tanks should always have some pressure in them to prevent:
   a) Moisture from entering.
   b) Drying out.
   c) Rusting inside.
   d) Metal fatigue.

5. According to the Department of Transportation regulations, scuba tanks must be hydrostatically tested every:
   a) 1 year.
   b) 3 years.
   c) 5 years.
   d) 10 years.

6. The primary purpose of the exposure suit is to:
   a) Preserve body heat during dives.
   b) Look good while diving.
   c) Provide buoyancy during dives.
   d) Prevent scrapes and cuts during dives.

7. Weighting systems are used by the diver primarily to:
   a) Provide excess weighting for diving.
   b) Offset the positive buoyancy created by the wet suit.
   c) Compensate for the buoyancy compensator.
   d) Offset the increasing pressure as the diver descends.

8. You should have your regulator serviced by a certified repair technician
   a) once every five years
   b) at least once per year
   c) once, immediately after you buy it
   d) once every ten years

9. Two types of materials that scuba tanks are made from are steel and _____.
   a) aluminum
   b) titanium
   c) stainless steel
   d) graphite

10. Stamped (engraved) markings on scuba cylinders include all of the following except:
   a) Serial number
   b) Hydrostatic test history
   c) Type of material used to make the cylinder
   d) Visual inspection information

Physics

11. If a diver on the surface takes a balloon filled with air and descends to a depth of 33 fsw, the volume of the balloon will
   a) Increase by half
   b) Be reduced by half.
   c) Increase 33%
   d) Be reduced 33%

12. Which gas law best explains diving medical problems such as ear and sinus squeeze?
   a) Water density.
   b) Dalton's law.
   c) Charles' law.
   d) Boyle's law.

13. Because of refraction, objects underwater appear _____ and _____ when the diver is looking through his/her mask.
   a) smaller; closer
   b) larger; closer
   c) smaller; farther away
   d) larger; farther away

14. A diver's body heat is lost through conduction (primarily) at a rate of approximately _____ times more rapidly than in air.
    a) 10
    b) 25
    c) 30
    d) 15

15. What type of pressure is defined as gauge (water) pressure plus atmospheric (air) pressure?
    a) Water
    b) Absolute
    c) Air
    d) Over

16. If a diver's surface air consumption rate is 25 psi per minute, what would be the consumption rate at 66 fsw?
    a) 75 psi per minute
    b) 80 psi per minute
    c) 60 psi per minute
    d) 50 psi per minute

17. A depth that is equivalent to one atmosphere in the ocean is equal to _____ feet in sea water and _____ feet in fresh water.
    a) 34; 33
    b) 33; 34
    c) 35; 33
    d) 33; 33

18. Which of the following statements is true
    a) Sea water is denser than fresh water
    b) A fresh water diver wearing the same equipment in salt water will need to add weight
    c) 1 cubic foot of fresh water weighs less than 1 cubic foot of salt water
    d) All of the above statements are true

19. Sound travels about _____ times faster in water than in air.
    a) 2
    b) 4
    c) 6
    d) 8

20. The first color lost in the spectrum upon descent during a dive is _____ .
    a) yellow
    b) red
    c) orange
    d) blue

Medicine and Physiology

21. Diving with a cold is not recommended in part because of the increased potential for the diver to experience difficulty due to:
    a) Middle ear or sinus squeeze.
    b) Suit squeeze.
    c) Nitrogen narcosis.
    d) Oxygen toxicity.

22. Breathing dry air, a scuba diver tends to become dehydrated while diving due to:
    a) Excessive perspiration.
    b) Moisturizing dry inhaled air.
    c) Saltwater absorbing moisture from the skin.
    d) The extreme amount of energy expended during a dive.

23. Symptoms of Nitrogen Narcosis are similar to:
    a) Caisson's disease.
    b) Asphyxia.
    c) Diver's disease.
    d) Alcoholic intoxication.

24. A diver's inability to equalize his/her ears during ascent (going up) could cause:
    a) Sinusitis.
    b) A block or reverse block.
    c) Internal ear squeeze.
    d) External ear squeeze.

25. Generally, your breathing pattern underwater should be
    a) slightly faster and shallower than you normally breathe
    b) the same as you normally breathe
    c) slightly slower and shallower than you normally breathe
    d) slightly slower and deeper than you normally breathe

26. To prevent air embolism, a diver should:
    a) Breathe 100 percent oxygen during scuba dives.
    b) Decompress correctly.
    c) Breathe compressed air only.
    d) Breathe normally at all times and never hold his/her breath.

27. A diver with blood and mucous in his/her mask upon surfacing will most likely have:
    a) Lung squeeze.
    b) Ear squeeze.
    c) Sinus squeeze.
    d) Air embolism.

28. If your dive buddy complains to you about having aching pain in his/her shoulder one hour after the dive, you might suspect:
    a) Arterial gas embolism.
    b) Decompression sickness.
    c) Nitrogen narcosis.
    d) Hypothermia.

29. The following rate of ascent for diving is acceptable when using the USN/NAUI dive tables or the NAUI RGBM dive tables:
    a) 90 feet per minute.
    b) 30 feet per minute.
    c) 70 feet per minute.
    d) 60 feet per minute.

30. A symptom of hypothermia which indicates that a diver should terminate his/her dive is:
    a) Mental alertness and the ability to concentrate.
    b) An elevated mood.
    c) Shivering.
    d) High body core temperature and sweating

Environment

31. Which of the following is the point at which a sudden change in water temperature occurs?
    a) A pinnacle.
    b) A thermocline.
    c) A halocline.
    d) An upwelling.

32. When diving in a current, careful planning is important because
    a) Currents cause flow deviation in the compass, complicating navigation.
    b) Boats are required if any current is present in order to safely dive.
    c) They are dangerous and should be avoided at all costs.
    d) Currents can make return to an exit point more difficult without proper planning.

33. _____is the underwater movement of water caused by wave action that you will experience when diving in areas close to shore.
    a) Surf
    b) Tide
    c) Tidal current
    d) Surge

34. The predictable daily rise and fall of the ocean at a single point is called:
    a) Surge.
    b) The tide.
    c) A thermocline.
    d) A halocline.

35. Most surface waves are caused by:
    a) Earthquakes.
    b) Upwellings.
    c) Wind.
    d) Thermoclines.

36. Examples of natural navigation aids divers may use during dives include:
    a) Ripple marks in the sand.
    b) Sun brightness/available light.
    c) Bottom contours.
    d) All of the above.

37. Almost all injuries from aquatic life are caused by _____ action on the part of the animal.
    a) defensive
    b) offensive
    c) aggressive
    d) planned

38. A diver can practice marine conservation by
    a) Avoid touching living organisms when diving.
    b) Using good buoyancy skills to avoid contact with the bottom.
    c) Observing local laws and regulations when engaged in collection or spear fishing
    d) All of the above contribute to marine conservation.

39. The first aid for sea stings, such as those from jellyfish is:
    a) The application of a stinging neutralizing agent.
    b) Applying a tourniquet.
    c) Wrapping the injured site tightly with a bandage.
    d) To do nothing.

40. Fresh water diving environments often require good buoyancy skills due to:
    a) Silt on the bottom that is easily kicked up reducing visibility
    b) Fresh water is more buoyant than salt water thereby making it more difficult to control buoyancy
    c) Temperature changes on the bottom which affects air flow in the BC
    d) Local regulations prohibit disturbing the bottom of fresh water lakes

<u>Dive Time Planning and Dive Tables</u> - Use the NAUI RGBM Dive Tables to answer questions 41 - 45. A copy of these tables may be found at the end of this exam or in your student materials.

41. The minimum surface interval required by NAUI RGBM Tables between two dives is:
    a) 1 Hour
    b) 2 Hours
    c) 12 Hours
    d) 24 Hours

42. NAUI RGBM Sea Level Tables allow dive three (3) to be repeated until the cumulative time reaches the Maximum Dive Time (MDT) for dive three.
    a) True
    b) False
    c) It depends on the length of the previous surface interval after dive two
    d) The RGBM Tables do not allow for a third dive on the same day

43. The Maximum Dive Time (MDT) for a dive to 60 fsw on your first dive of the day is
    a) no limit
    b) 55 minutes
    c) 60 minutes
    d) 100 minutes

44. If you accidently exceed your MDT by less than 5 minutes, you must conduct a decompression stop at 15 fsw for
    a) 5 minutes
    b) 6 minutes
    c) 8 minutes
    d) 10 minutes

45. Your first dive of the day is to 57 fsw for 50 minutes. You spend 1 hour and 40 minutes on the surface. What is the maximum depth and time you may use for your second dive of the day?
    a) 55 fsw/55 minutes
    b) 40 fsw/110 minutes
    c) 45 fsw/14 minutes
    d) 45 fsw/80 minutes

46. Dive computers offer an advantage over dive tables because
    a) They are easier to use than dive tables
    b) They give the diver credit for the shallow portion of the dive
    c) Computers are more accurate than dive tables
    d) Computers are safer than dive tables because they calculate the most conservative schedule for the dive

47. A three-diver team wants to complete their dive using dive computers. The minimum number of computers required for this team is
    a) 1 computer
    b) 2 computers
    c) 3 computers
    d) 4 computers

48. Most modern dive computers provide multiple points of information for divers including
    a) Maximum depth alarm to warn the diver if he or she exceeded their intended depth
    b) Ascent alarm if the diver is ascending too quickly
    c) Remaining allowable dive time to avoid decompression
    d) All of the above

49. Before using a dive computer, a diver
    a) Must be certified for computer diving by a diving instructor or manufacturer
    b) Must be thoroughly familiar with the computer he or she will be using
    c) Must be sure their dive partner will also be using a dive computer during their dives together
    d) All of the above

50. Proper care of a dive computer includes
    a) Changing the battery annually or in accordance with the manufacturers recommendation
    b) Disassembly and cleaning annually by a qualified technician
    c) Returned annually to the manufacturer for inspection and service
    d) Inspection only by the diver and return to dealer only if a problem is identified

Dive Planning and Skills

51. A diver wearing a wet suit should _____ to safely control buoyancy during descent
    a) Do nothing
    b) Add air to the buoyancy compensator (BC) device
    c) Let air out of the buoyancy compensator (BC) device
    d) Add additional weight based on the planned depth before entering the water

52. The preferred action to take if you find yourself alone and out of air at 30 feet in open water is:
    a) Emergency swimming ascent (ESA)
    b) Buddy-breathing ascent
    c) Octopus-breathing ascent
    d) Weight-dropping buoyant ascent

53. Which of the following limits should be established prior to every scuba dive?
    a) Maximum bottom time, average depth, minimum air pressure.
    b) Maximum bottom time, maximum depth, minimum air pressure.
    c) Maximum swim distance, maximum bottom time, minimum air pressure.
    d) Maximum swim distance, maximum depth, maximum residual nitrogen.

54. A diver experiencing stress or panic during a dive should
    a) Ascend immediately
    b) Stop-Breathe-Think-Breathe-Act
    c) Descend and continue the dive
    d) Swim at maximum pace toward the beach or boat

55. Continued loss of body heat in cold water will produce
    a) Muscle cramps.
    b) Progressive immobility.
    c) Insensibility to pain.
    d) All of the above.

56. It is recommended that a dive team diving from an anchored boat begin their dive:
    a) With the prevailing current.
    b) At low tide.
    c) Against the prevailing current.
    d) With positive buoyancy.

57. If during a dive you and your buddy become separated, you should:
    a) Return to where you last saw him and search.
    b) Go up a few feet and search until you locate his exhaust bubbles.
    c) Remain where you are until he finds you.
    d) Spend no more than one minute looking and then surface.

58. Immediately upon reaching the dive site, you action a diver should take is:
    a) Check your equipment.
    b) Suit up.
    c) Discuss the dive plan with your buddy.
    d) Observe conditions.

59. Completing this entry level scuba certification course makes you knowledgeable and skillful enough to dive safely in or at:
    a) Closed compartments in shipwrecks.
    b) Open water with conditions similar to those in which you were trained.
    c) Open water deeper than 100 feet.
    d) Anywhere.

60. True or False: To have a 600 psig minimum pressure at the end of a dive, a dive team should begin their return when the first diver reaches a cylinder pressure of 1700 psig, assuming a 3000 psig filled cylinder at the start of the dive.
    a) True
    b) False